



# **Mapping Symbolology for the *Clean Water Act***

November 2009

**Produced For:**

Source Protection Programs Branch, Ministry of the Environment

**Produced By:**

Water Resources Information Program (WRIP),  
Geographic Information Branch, Ministry of Natural Resources

**In conjunction with:**

Conservation Ontario

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**Version History - Page 1**

Document Release Date	Description of changes
April 2009	<ul style="list-style-type: none"> <li>• Add Settlement Areas as a border</li> <li>• GUDI intake point is required</li> <li>• Highly Vulnerable Aquifers which are directly related (in fact the same thing as) high intrinsic vulnerability so the symbols should be very similar</li> <li>• The symbols for IPZ2 and IPZ3 scoring should also reference WHPA E and WHPA F as they will be the same.</li> <li>• transport pathway polygon, line and point can be removed and replaced simply by a Transport Pathway Area of Influence. This will be part of the IPZ and WHPAs so perhaps some sort of hatch to differentiate it would be prudent.</li> <li>• Symbols from John Gaiot SymbolUpdates_Round3.pdf, Example Figure VI.6&amp;7 Type C.pdf</li> <li>• Threats symbols and data set descriptions</li> <li>• Water Budgets symbols</li> <li>• deleted CURB symbol</li> <li>• deleted blank data set descriptions like significant Groundwater recharge area</li> <li>• deleted Cemeteries symbol</li> <li>• Delete: WSIS Threats open and Threats closed(there is no WSIS) see HWIN</li> <li>• Revise: HWIN open and add HWIN closed (pg 20)</li> <li>• Delete: Groundwater Taking outside watershed divide</li> <li>• Delete: Groundwater Supply Area and Surface Water Supply Area</li> <li>• Add: Well Type IV – 1st Nations</li> <li>• Delete Operating Mine Site and Abandoned Mine Site Symbol</li> <li>• Delete : Annual withdrawals groundwater and Annual withdrawals surfacewater</li> <li>• Adjust WHPA C1 to be a different colour than WHPA C</li> <li>• Move the GUDI point to same page as WHPA E</li> <li>• Rename Provincial Groundwater Monitoring Network is PGWMN not PGWN</li> <li>• Change ORIS/Spills Database symbol so it is not similar to the 21 Threats (pg 20)</li> <li>• Revise symbol description Intake Classification Type D - Inland Lakes and Impoundments</li> <li>• Delete: Cataraqui Region SPR, Niagara Peninsula SPR, Essex Region SPR, Lakehead Region SPR, Sault Ste. Marie Region SPR, Mattagami Region SPR, Sudbury SPR, North Bay-Mattawa SPR</li> <li>• Water Budgets: Add L, M, H to fill colors and include black solid boundary. Add note: Fill colours optional on maps with multiple layers</li> <li>• Drinking Water System 3 should be a circle (the same as the other MOH regulated entities)</li> <li>• Add acronym Record of Site Condition - RSC</li> <li>• Clarify "Brownfield RSC"</li> <li>• Add Contaminated Site</li> <li>• Add Waste Site Open</li> </ul>

### Version History - Page 2

Document Release Date	Description of changes
April 2009	<ul style="list-style-type: none"> <li>• Add Waste Site Closed</li> <li>• Add Haz Waste Generator</li> <li>• Add Haz Waste Receiver</li> <li>• Delete Non Ag source material (see threats pg 24)</li> <li>• Delete Ag source material</li> <li>• 120 m setback move to WHPA page</li> <li>• Recharge Reduction should be replace Potential Recharge Reduction</li> <li>• Add: Municipal / Provincial Sewage System</li> <li>• Add: Industrial Sewage System</li> <li>• Delete Concentration Ranges</li> <li>• Delete Groundwater supply area</li> <li>• Delete Surfacewater supply area</li> </ul>
November 2009	<ul style="list-style-type: none"> <li>• Change: Symbolology document version to 5, now same version number as Assessment Report Outputs Data Specifications document</li> <li>• Insert: Version History chart</li> <li>• Move: Waterbody symbol from Misc. Symbols - Polygon section to Boundaries section</li> <li>• Change: to SPA – Napanee, Moira and Prince Edward County have combined into Quinte SPA</li> <li>• Change: colour of Raisin Region SPA</li> <li>• Change: the colour for IPZ-2 and WHPA E (same colour)</li> <li>• Rename: WHPA - D (GUDI) to WHPA - F (GUDI)</li> <li>• Change: colour of WHPA - F (GUDI) and IPZ-3 (same colour)</li> <li>• Add: Cartographic Specifications to all Prescribed Drinking Water Threats symbols</li> <li>• Change: Misc. Symbols - Polygon to Managed Lands and Livestock Density</li> <li>• Add: Agricultural Managed Lands and Non-Agricultural Managed Lands</li> <li>• Removed versioning</li> <li>• Add symbol Riparian Areas</li> <li>• Add symbol Wetlands</li> <li>• Add symbol Woodlands</li> <li>• Rework of label placement for Prescribed Drinking Water Threats symbolology (Appendix E and F)</li> </ul>
February 2010	<ul style="list-style-type: none"> <li>• Add symbol Fertilizer</li> <li>• Change: Regulation Limit to Conservation Authority Regulation Limit</li> <li>• Add symbol Water Control Structures</li> <li>• Add symbol Direction of water flow</li> <li>• Add symbol Potentiometric surface levels</li> <li>• Add symbol Sewershed</li> </ul>













**Boundaries - (Base Data)**

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
Watershed		lineweight: 0.71mm (2pt) dash-gap: 4.23mm (12pt) - 0.71mm(2pt) - 0.71mm(2pt) - 0.71mm(2pt) - 0.71mm(2pt)	CMYK 75, 38, 0, 0 RGB 58, 137, 201	
SWP Watershed Region		lineweight: 0.53mm (1.5pt)	CMYK 15, 65, 0, 35 RGB 149, 83, 126	
SWP Watershed Area		lineweight: 0.25mm (0.7pt)	CMYK 15, 65, 0, 35 RGB 149, 83, 126	
Road - Primary Highway		lineweight: 0.88mm (2.5pt)	CMYK 0, 0, 0, 50 RGB 127, 127, 127	
Road - Secondary Highway		lineweight: 0.53mm (1.5pt)	CMYK 0, 0, 0, 50 RGB 127, 127, 127	
Road - Other		lineweight: 0.35mm (1.0pt)	CMYK 0, 0, 0, 50 RGB 127, 127, 127	
Conservation Authority Regulation Limit		lineweight: 0.18mm (0.5pt) dash: 1.41mm (4pt)	CMYK 0, 100, 100, 0 RGB 237, 28, 36	
Settlements		lineweight: 0.35mm (1.0pt)	CMYK 0,0,0,100 RGB 0, 0, 0	
Political Boundary - Provincial		lineweight: 1.6mm (4.535pt) dash-gap: 1.0mm (2.835pt) - 0.8mm(2.268pt) - 1.0mm (2.835pt) - 0.8mm(2.268pt) - 5.5mm (15.591pt) - 0.8mm(2.268pt)	CMYK 0, 0, 0, 25 RGB 198, 200, 202	
Political Boundary - Upper Tier		lineweight: 1.6mm (4.535pt) dash-gap: 1.0mm (2.835pt) - 0.8mm(2.268pt) - 1.0mm (2.835pt) - 0.8mm(2.268pt) - 4.0mm (11.339pt) - 0.8mm(2.268pt)	CMYK 0, 0, 0, 25 RGB 198, 200, 202	
Political Boundary - Lower Tier		lineweight: 1.3mm (3.685pt) dash-gap: 0.5mm (1.417pt) - 0.7mm(1.984pt) - 5.5mm(15.591pt) - 0.7mm(1.984pt)	CMYK 0, 0, 0, 25 RGB 198, 200, 202	
Waterbody		lineweight: 0.127mm (0.36pt)	CMYK 15, 0, 0, 0 RGB 212, 239, 252 RGB 0, 174, 222 CMYK 74, 10, 4, 0	
Riparin Area		lineweight: 0.18mm (0.5pt) picture fill: shd53.bmp with transparent background C:\Program Files\ArcGIS\Styles\Pictures	CMYK 60, 20, 33, 0 RGB 102, 205, 171	
Wetland		lineweight: 0.18mm (0.5pt) picture fill: swamp.bmp with transparent background C:\Program Files\ArcGIS\Styles\Pictures	CMYK 60, 40, 20, 0 RGB 102, 153, 205	
Woodland		lineweight: 0.18mm (0.5pt) picture fill: pat054.bmp with transparent background C:\Program Files\ArcGIS\Styles\Pictures	CMYK 55, 46, 73, 0 RGB 114, 137, 205	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	






















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## Source Protection Planning Regions

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications		ID
Ausable - Bayfield Maitland Valley			CMYK	62, 54, 77, 0	
			RGB	98, 117, 59	
CTC			CMYK	13, 8, 39, 0	
			RGB	222, 255, 156	
Halton - Hamilton			CMYK	60, 24, 61, 0	
			RGB	103, 193, 100	
Lake Erie			CMYK	22, 16, 38, 0	
			RGB	199, 215, 158	
Mississippi - Rideau			CMYK	9 0, 13, 0	
			RGB	232, 255, 222	
Other			CMYK	9, 0, 25, 0	
			RGB	233, 255, 190	
			RGB	110, 110, 110	
			CMYK	0, 0, 0, 5	
Quinte			CMYK	53, 43, 71, 0	
			RGB	121, 145, 73	
Raisin Region South Nation			CMYK	29, 16, 38, 0	
			RGB	180, 215, 158	
South Georgian Bay Lake Simcoe			CMYK	51 44, 60, 0	
			RGB	233, 255, 190	
Saugeen GreySable Northern Bruce Peninsula			CMYK	13,1,21,0	
			RGB	221, 252, 202	
Thames, Sydenham and Region			CMYK	16, 20, 60, 0	
			RGB	137, 205, 102	
Trent Conservation Coalition			CMYK	29, 16, 38, 0	
			RGB	180, 215, 158	
			CMYK		
			RGB		
			CMYK		
			RGB		
			CMYK		
			RGB		
			CMYK		
			RGB		
			CMYK		
			RGB		
			CMYK		
			RGB		


















## Source Protection Planning Areas (page 1)

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
Ausable Bayfield			CMYK 36, 10, 35, 0 RGB 184, 207, 218	
Cataraqui			CMYK 12, 6, 31, 0 RGB 187, 199, 170	
Catfish Creek			CMYK 29, 13, 17, 0 RGB 179, 200, 203	
Central Lake Ontario			CMYK 23, 4, 12, 0 RGB 194, 220, 220	
Credit Valley			CMYK 31, 8, 37, 0 RGB 180, 205, 172	
Crowe Valley			CMYK 30, 1, 33, 0 RGB 180, 217, 184	
Essex			CMYK 32, 6, 28, 0 RGB 175, 208, 190	
Ganaraska Region			CMYK 18, 10, 29, 0 RGB 209, 212, 185	
Grand River			CMYK 18, 4, 26, 0 RGB 209, 223, 196	
Grey Sauble			CMYK 21, 8, 9, 0 RGB 196, 214, 220	
Halton			CMYK 25, 6, 26, 0 RGB 191, 212, 193	
Hamilton			CMYK 16, 7, 29, 0 RGB 214, 218, 187	
Kawartha-Haliburton			CMYK 22, 5, 33, 0 RGB 204, 218, 181	
Kettle Creek			CMYK 31, 32, 20, 0 RGB 176, 174, 203	
Lakehead			CMYK 29, 16, 20, 0 RGB 182, 215, 203	
Lakes Simcoe & Couchiching/Black River			CMYK 27, 22, 15, 0 RGB 185, 200, 217	
Long Point			CMYK 29, 29, 23, 0 RGB 182, 180, 197	
Lower Thames Valley			CMYK 27, 19, 29, 0 RGB 187, 206, 182	
Lower Trent			CMYK 22, 22, 29, 0 RGB 198, 199, 180	
Maitland Valley			CMYK 20, 19, 11, 0 RGB 205, 206, 226	
Mattagami			CMYK 28, 19, 15, 0 RGB 184, 207, 218	

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## Source Protection Planning Areas (page 2)

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications		ID
Mississippi Valley			CMYK	27, 22, 33, 0	
			RGB	187, 199, 170	
Quinte			CMYK	27, 18, 19, 0	
			RGB	190, 209, 206	
Niagara Peninsula			CMYK	26, 11, 13, 0	
			RGB	188, 226, 221	
Nickel District			CMYK	25, 15, 25, 0	
			RGB	190, 218, 191	
North Bay-Mattawa			CMYK	23, 24, 16, 0	
			RGB	196, 194, 214	
Northern Bruce Peninsula			CMYK	34, 23, 25, 0	
			RGB	168, 197, 190	
Nottawasaga Valley			CMYK	34, 16, 16, 0	
			RGB	178, 213, 214	
Otonabee-Peterborough			CMYK	34, 23, 9, 0	
			RGB	190, 197, 223	
Raisin Region			CMYK	28, 22, 7, 18	
			RGB	155, 159, 179	
Rideau Valley			CMYK	22, 12, 20, 0	
			RGB	200, 224, 205	
Saugeen Valley			CMYK	25, 26, 15, 0	
			RGB	190, 189, 217	
Sault Ste. Marie			CMYK	23, 19, 27, 0	
			RGB	196, 206, 187	
Severn Sound			CMYK	23, 25, 22, 0	
			RGB	168, 190, 199	
South Nation			CMYK	22, 11, 14, 0	
			RGB	199, 226, 220	
St. Clair Region			CMYK	27, 20, 25, 0	
			RGB	186, 203, 190	
Toronto			CMYK	30, 25, 22, 0	
			RGB	179, 191, 200	
Upper Thames River			CMYK	30, 11, 26, 0	
			RGB	196, 226, 188	
			CMYK		
			RGB		
			CMYK		
			RGB		
			CMYK		
			RGB		



## Water Budgets - (Water Quantity)

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
Local Area - Surface Water		lineweight: 0.176mm (0.5pt)	CMYK 44, 0, 60, 0 RGB 149, 206, 139 CMYK 0, 112, 59 RGB 100, 0, 92, 42	
Local Area - Groundwater		lineweight: 0.176mm (0.5pt)	CMYK 2, 1, 35, 0 RGB 251, 243, 182 CMYK 126, 100, 68 RGB 25, 40, 65, 42	
Subwatershed Stress Level Significant - Surface Water			CMYK 68, 23, 71, 23 RGB 76, 127, 90	
Subwatershed Stress Level Moderate - Surface Water			CMYK 30, 9, 34, 9 RGB 166, 187, 163	
Subwatershed Stress Level Low - Surface Water			CMYK 10, 3, 11, 0 RGB 227, 234, 225	
Subwatershed Stress Level Significant - Groundwater			CMYK 5, 24, 100, 0 RGB 242, 192, 25	
Subwatershed Stress Level Moderate - Groundwater			CMYK 6, 8, 48, 0 RGB 235, 219, 149	
Subwatershed Stress Level Low - Groundwater			CMYK 2, 2, 12, 0 RGB 249, 244, 255	
Significant Groundwater Recharge Area (SGRA)			CMYK 0, 0, 0, 100 RGB 35, 31, 32	
Water Taking Threat		installation of swp.ttf required symbol size: 3.18mm (9pt) circle diameter: 3.18mm (9pt) circle outline width: 0.35mm (1pt) crosshair width: 0.35mm (1pt)	CMYK 39, 80, 60, 0 RGB 168, 85, 96	
Recharge Reduction Threat		lineweight: 0.09mm (.25pt)	CMYK 5, 4, 32, 0 RGB 242, 234, 185 CMYK 168, 85, 96 RGB 39, 80, 60, 0	
Active Permit to Take Water Surface Water		installation of MOESymbolologyA.ttf required white halo mask 0.18mm (0.50pt)	CMYK 62, 12, 55, 22 RGB 83, 144, 116 CMYK 255, 255, 255 RGB 0, 0, 0, 0	
Active Permit to Take Water Groundwater		installation of MOESymbolologyA.ttf required white halo mask 0.176mm (0.5pt)	CMYK 0, 40, 50, 20 RGB 205, 140, 106 CMYK 255, 255, 255 RGB 0, 0, 0, 0	
Local Area Risk Level Significant		if multiple fills are overlapping, remove the fill of this symbol and use alphanumeric representation	CMYK 0, 100, 100, 0 RGB 237, 34, 39 CMYK 0, 0, 0, 100 RGB 35, 31, 32	
Local Area Risk Level Moderate		if multiple fills are overlapping, remove the fill of this symbol and use alphanumeric representation	CMYK 0, 0, 100, 0 RGB 255, 242, 0 CMYK 0, 0, 0, 100 RGB 35, 31, 32	
Local Area Risk Level Low		if multiple fills are overlapping, remove the fill of this symbol and use alphanumeric representation	CMYK 50, 0, 100, 0 RGB 140, 198, 63 CMYK 0, 0, 0, 100 RGB 35, 31, 32	
Potentiometric surface - upwards			CMYK 25, 18, 0, 0 RGB 187, 196, 228	
Potentiometric surface - downwards			CMYK 100, 55, 55, 0 RGB 0, 107, 118	
Water Control Structure		installation of swp.ttf required symbol size: 6.35 (18pt)	CMYK 0, 0, 0, 100 RGB 35, 31, 32	
Direction of water flow		installation of ESRI Dimensioning.ttf required symbol size: 6.35 (18pt) Angle: -90	CMYK 55, 3, 0, 0 RGB 115, 178, 255	
			CMYK RGB	

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[illegible]






## Vulnerability - Well Head Protection Areas (I.V) (Groundwater Water Quality)

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
WHPA-A		lineweight: 0.176mm (0.5pt)	CMYK 0, 50, 100, 20 RGB 204, 122, 33	
WHPA-B		lineweight: 0.176mm (0.5pt)	CMYK 0, 38, 75, 0 RGB 250, 172, 86	
WHPA-C		lineweight: 0.176mm (0.5pt)	CMYK 0, 25, 50, 0 RGB 253, 198, 137	
WHPA-C1		lineweight: 0.176mm (0.5pt)	CMYK 0, 25, 50, 9 RGB 253, 198, 137	
WHPA-D		lineweight: 0.176mm (0.5pt)	CMYK 0, 0, 50, 0 RGB 255, 247, 153	
120m Minimum Setback		lineweight: 0.18mm (0.5pt) dash: 0.71mm (2pt)	CMYK 87, 52, 0, 0 RGB 07, 13, 188	
WHPA - Q1		lineweight: 0.176mm (0.5pt)	CMYK 27, 45, 0, 0 RGB 184, 147, 196	
WHPA - Q2		lineweight: 0.176mm (0.5pt)	CMYK 13, 22, 0, 0 RGB 216, 198, 225	
IPZ - Q		lineweight: 0.176mm (0.5pt)	CMYK 41, 4, 18, 0 RGB 148, 204, 208	
IPZ-1		lineweight: 0.176mm (0.5pt) line dash: 2.82mm (8pt)	CMYK 21, 93, 86, 11 RGB 179, 51, 50	
IPZ-2 (includes Transport Pathways)		lineweight: 0.176mm (0.5pt) line dash: 2.82mm (8pt)	CMYK 78, 10, 42, 0 RGB 0, 169, 163	
IPZ-3 (includes Transport Pathways)		lineweight: 0.176mm (0.5pt) line dash: 2.82mm (8pt)	CMYK 20, 0, 25, 0 RGB 205, 231, 202	
WHPA-E (GUIDI)		lineweight: 0.176mm (0.5pt)	CMYK 78, 10, 42, 0 RGB 0, 169, 163	
WHPA-F (GUIDI)		lineweight: 0.176mm (0.5pt)	CMYK 20, 0, 25, 0 RGB 205, 231, 202	
GUIDI Feature		installation of swp.tif required size 5.29mm (15pt)	CMYK 84, 66, 0, 0 RGB 0, 92, 230	
WHPA - All Combined			CMYK 0, 50, 100, 20 RGB 204, 122, 33	
Vulnerability Score - Area for IPZ-3		lineweight: 0.353mm (1pt) label: Arial Bold Italic 4pt	CMYK 0, 0, 0, 100 RGB 35, 31, 32	
Vulnerability Score - Area for IPZ-2		lineweight: 0.353mm (1pt) label: Arial Bold Italic 4pt	CMYK 0, 0, 0, 100 RGB 35, 31, 32	
Vulnerability Score - Area for IPZ-1		lineweight: 0.353mm (1pt) label: Arial Bold Italic 4pt	CMYK 0, 0, 0, 100 RGB 35, 31, 32	
			CMYK RGB	
			CMYK RGB	

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## Vulnerability - Scoring for Inside and Outside WHPA's (Groundwater Quality)

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
WHPA Vulnerability Scoring - 2 (low)		<i>if multiple fills are overlapping, remove the fill of this symbol and use alphanumeric representation</i>	<div> <div>CMYK</div> <div>20, 0, 25, 0</div> <div>RGB</div> <div>204, 198, 63</div> </div>	
WHPA Vulnerability Scoring - 4		<i>if multiple fills are overlapping, remove the fill of this symbol and use alphanumeric representation</i>	<div> <div>CMYK</div> <div>50, 0, 100, 0</div> <div>RGB</div> <div>140, 198, 63</div> </div>	
WHPA Vulnerability Scoring - 6		<i>if multiple fills are overlapping, remove the fill of this symbol and use alphanumeric representation</i>	<div> <div>CMYK</div> <div>0, 0, 100, 0</div> <div>RGB</div> <div>255, 242, 0</div> </div>	
WHPA Vulnerability Scoring - 8		<i>if multiple fills are overlapping, remove the fill of this symbol and use alphanumeric representation</i>	<div> <div>CMYK</div> <div>0, 50, 100, 0</div> <div>RGB</div> <div>247, 147, 30</div> </div>	
WHPA Vulnerability Scoring - 10 (high)		<i>if multiple fills are overlapping, remove the fill of this symbol and use alphanumeric representation</i>	<div> <div>CMYK</div> <div>0, 100, 100, 0</div> <div>RGB</div> <div>237, 34, 39</div> </div>	
			<div> <div>CMYK</div> <div></div> <div>RGB</div> <div></div> </div>	
			<div> <div>CMYK</div> <div></div> <div>RGB</div> <div></div> </div>	
			<div> <div>CMYK</div> <div></div> <div>RGB</div> <div></div> </div>	
			<div> <div>CMYK</div> <div></div> <div>RGB</div> <div></div> </div>	
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			<div> <div>CMYK</div> <div></div> <div>RGB</div> <div></div> </div>	
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			<div> <div>CMYK</div> <div></div> <div>RGB</div> <div></div> </div>	
			<div> <div>CMYK</div> <div></div> <div>RGB</div> <div></div> </div>	

## Vulnerability - Transport Pathways

[illegible]

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## Prescribed Drinking Water Threats

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The application of agricultural source material to land.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The storage of agricultural source material.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The management of agricultural source material.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The application of non-agricultural source material to land.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The handling and storage of non-agricultural source material.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The application of commercial fertilizer to land.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The handling and storage of commercial fertilizer.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The application of pesticide to land.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The handling and storage of pesticide.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The application of road salt.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The handling and storage of road salt.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The storage of snow.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The handling and storage of fuel.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The handling and storage of a dense non-aqueous phase liquid.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The handling and storage of an organic solvent.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The management of runoff that contains chemicals used in the de-icing of aircraft.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
An activity that reduces the recharge of an aquifer.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.		installation of swp.tff required apply labels centered on the symbol <i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK 0, 0, 0, 30 RGB 178, 178, 178 RGB 35, 31, 32 CMYK 0, 0, 0, 100	

### Threats - Drinking Water Quality - Areas with Contamination Groundwater and/or Land

[illegible]

[illegible]



### Threats - Drinking Water Quality - Other

[illegible]

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## Threats - Drinking Water Quality - Potential Contaminant Sources (Base Data) page 1

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
Historical Land Uses		installation of MOE Symbolgy B.ttf required	CMYK 10, 35, 0, 0 RGB 230, 166, 255	
Certificate of Approval Database (CofA) Water		installation of swp.ttf required size 5.29mm (15pt)	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Certificate of Approval Database (CofA) Industrial waterwater		installation of swp.ttf required size 5.29mm (15pt)	CMYK 74, 18, 4, 0 RGB 66, 209, 245	
Certificate of Approval Database (CofA) Municipal/Provincial Sewage		installation of swp.ttf required size 5.29mm (15pt)	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Certificate of Approval Database (CofA) Municipal/Provincial Waterworks		installation of swp.ttf required size 5.29mm (15pt)	CMYK 10, 35, 0, 0 RGB 230, 166, 255	
Municipal Coal Gasification Plant Site Inventory & Inventory of Coal Gasification Plant Waste Sites - producing		installation of swp.ttf required size 6.35mm (18pt)	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Municipal Coal Gasification Plant Site Inventory & Inventory of Coal Gasification Plant Waste Sites - non-producing		installation of swp.ttf required size 6.35mm (18pt)	CMYK 100, 0, 100, 0 RGB 0, 255, 0	
National Pollutant Release Inventory (NPRI) - Discharge		installation of swp.ttf required	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Sample Results Data Store (SRDS) (M in symbol for MISA)		installation of MOE Symbolgy B.ttf required	CMYK 0, 35, 100, 0 RGB 255, 166, 0	
Waste Site - open		installation of swp.ttf required	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Water Site - closed		installation of swp.ttf required	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Petroleum Well		installation of swp.ttf required	CMYK 0, 99, 100, 0 RGB 237, 34, 36	
Natural Areas of Contamination		installation of swp.ttf required lineweight: 0.247mm (0.7pt) interior line angle: 45° interior line width: 0.247mm (0.7pt) interior line separation: 1.41mm (4pt)	CMYK 100, 0, 100, 0 RGB 0, 166, 81	
Underground Fuel Storage Tanks		installation of swp.ttf required	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Uncovered Sand/Salt Storage		installation of swp.ttf required	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Covered Salt Domes		installation of swp.ttf required	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Abandoned Mine Site (AMIS)		installation of MOE Symbolgy B.ttf required	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Open Mine Site		installation of MOE Symbolgy B.ttf required	CMYK 35, 31, 32 RGB 0, 0, 0, 100	
Municipal/Provincial Sewage System		installation of swp.ttf required	CMYK 0, 0, 0, 30 RGB 178, 178, 178	
Industrial Sewage System		installation of swp.ttf required	CMYK 205, 170, 102 RGB 20, 33, 60, 0	
Known Spills		installation of MOE Symbolgy B.ttf required	CMYK 0, 0, 0, 30 RGB 178, 178, 178	
			CMYK 35, 31, 32 RGB 0, 0, 0, 100	
			CMYK 0, 100, 70, 12 RGB 216, 100, 29	

## Threats - Drinking Water Quality - Potential Contaminant Sources (Base Data) page 2

[illegible]









# Mapping Symbolology for the Clean Water Act

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## Drinking Water Symbols (page 1)

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
		<i>Please refer to Appendix E - Example of Symbology and Label Placement</i>	CMYK	
			RGB	
Stormwater Facility Locations		installation of swp.tff required circle diameter: 4.93mm (14pt)	CMYK 0, 0, 0, 75	
			RGB 99, 100, 102	
Well		installation of swp.tff required symbol size: 3.53mm (10pt)	CMYK 83, 7, 96, 1	
			RGB 0, 165, 81	
Well Type - I		installation of swp.tff required symbol size: 3.53mm (10pt) label: Arial 8pt, white halo 0.18mm (0.5pt)	CMYK 83, 7, 96, 1	
			RGB 0, 165, 81	
Well Type - II		installation of swp.tff required symbol size: 3.53mm (10pt) label: Arial 8pt, white halo 0.18mm (0.5pt)	CMYK 83, 7, 96, 1	
			RGB 0, 165, 81	
Well Type - III		installation of swp.tff required symbol size: 3.53mm (10pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: southeast corner of point	CMYK 83, 7, 96, 1	
			RGB 0, 165, 81	
Well Type - IV		installation of swp.tff required symbol size: 3.53mm (10pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: southeast corner of point	CMYK 83, 7, 96, 1	
			RGB 0, 165, 81	
Intake Classification Type A - Great Lakes		installation of swp.tff required symbol size: 3.53mm (10pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: west of point	CMYK 2, 4, 92, 0	
			RGB 255, 230, 44	
Intake Classification Type B - Connecting Channels		installation of swp.tff required symbol size: 3.53mm (10pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: west of point	CMYK 2, 4, 92, 0	
			RGB 255, 230, 44	
Intake Classification Type C - Rivers		installation of swp.tff required symbol size: 3.53mm (10pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: west of point	CMYK 2, 4, 92, 0	
			RGB 255, 230, 44	
Intake Classification Type D - Inland Lakes and Impoundments		installation of swp.tff required symbol size: 3.53mm (10pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: west of point	CMYK 2, 4, 92, 0	
			RGB 255, 230, 44	
Private Water Well		installation of swp.tff required symbol size: 4.23mm (12pt)	CMYK 100, 0, 0, 0	
			RGB 0, 174, 239	
			CMYK	
			RGB	
			CMYK	
			RGB	
			CMYK	
			RGB	
			CMYK	
			RGB	
			CMYK	
			RGB	
			CMYK	
			RGB	
			CMYK	
			RGB	













## Drinking Water Symbols (page 2)

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
<i>The Following Drinking Water Symbols can be applied to Water Treatment Plant (WTP) dataset class (subset of DWS)</i>		<i>WTP is and optional dataset and is not required for an Assessment Report. These symbols can be displayed as a reference</i>	CMYK RGB	
Drinking Water System - 1 Large Municipal Residential System (MOE Regulated)	 1	installation of swp.ttf required symbol size: 4.23mm (12pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: northeast of point	CMYK RGB	0, 0, 0, 50 145, 147, 150
Drinking Water System - 2 Small Municipal Residential System (MOE Regulated)	 2	installation of swp.ttf required symbol size: 4.23mm (12pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: northeast of point	CMYK RGB	0, 0, 0, 50 145, 147, 150
Drinking Water System - 3 Large Municipal Non-Residential System (MOH Regulated)	 3	installation of swp.ttf required symbol size: 4.23mm (12pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: northeast of point	CMYK RGB	0, 0, 0, 50 145, 147, 150
Drinking Water System - 4 Small Municipal Non-Residential System (MOH Regulated)	 4	installation of swp.ttf required symbol size: 4.23mm (12pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: northeast of point	CMYK RGB	0, 0, 0, 50 145, 147, 150
Drinking Water System - 5 Non-Municipal Year-Round Residential System (MOH Regulated)	 5	installation of swp.ttf required symbol size: 4.23mm (12pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: northeast of point	CMYK RGB	0, 0, 0, 50 145, 147, 150
Drinking Water System - 6 Non-Municipal Seasonal Residential System (MOH Regulated)	 6	installation of swp.ttf required symbol size: 4.23mm (12pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: northeast of point	CMYK RGB	0, 0, 0, 50 145, 147, 150
Drinking Water System - 7 Large Non-Municipal Non-Residential System (MOH Regulated)	 7	installation of swp.ttf required symbol size: 4.23mm (12pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: northeast of point	CMYK RGB	0, 0, 0, 50 145, 147, 150
Drinking Water System - 8 Small Non-Municipal Non-Residential System (MOH Regulated)	 8	installation of swp.ttf required symbol size: 4.23mm (12pt) label: Arial 8pt, white halo 0.18mm (0.5pt) label position: northeast of point	CMYK RGB	0, 0, 0, 50 145, 147, 150
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	





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## Managed Lands, Livestock Density, Impervious Surface

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications		ID
Agricultural Managed Lands		<i>if necessary, add "Percent of Managed Lands" as a label</i>	CMYK	20, 50, 100, 68	
			RGB	90, 59, 0	
Non-Agricultural Managed Lands			CMYK	0, 100, 0, 0	
			RGB	236, 0, 140	
Livestock Density (ASM) <0.5 Nutrient Unit			CMYK	0, 40, 80, 0	
			RGB	255, 153, 51	
Livestock Density (ASM) 0.5-1.0 Nutrient Unit			CMYK	45, 0, 75, 0	
			RGB	149, 203, 110	
Livestock Density (ASM) >1.0 Nutrient Unit			CMYK	65, 25, 0, 0	
			RGB	80, 159, 215	
Managed Land < 40%			CMYK	20, 0, 30, 0	
			RGB	206, 230, 193	
Managed Land 40-80%			CMYK	45, 0 60, 0	
			RGB	146, 204, 139	
Managed Land > 80%			CMYK	75, 0 100, 0	
			RGB	57, 181, 74	
Impervious Surface Related to Road Salt < 1%			CMYK	20, 0, 30, 0	
			RGB	208, 230, 193	
Impervious Surface Related to Road Salt 1 - <8%			CMYK	0, 0, 75, 0	
			RGB	255, 244, 96	
Impervious Surface Related to Road Salt 8 - <80%			CMYK	0, 30, 80, 0	
			RGB	253, 186, 77	
Impervious Surface Related to Road Salt equal to or greater than 80%			CMYK	0, 80, 80, 0	
			RGB	241, 90, 64	
Fertilizer			CMYK	23, 0 100, 0	
			RGB	215, 223, 35	
			CMYK		
			RGB		
			CMYK		
			RGB		
			CMYK		
			RGB		
			CMYK		
			RGB		
			CMYK		
			RGB		
			CMYK		
			RGB		

## Misc. Symbols - Points

Data Set Description	Cartographic Representation	Cartographic Specifications	Colour Specifications	ID
Electric Power Generation		installation of swp.tif required symbol size: 3.53mm (10pt)	CMYK 0, 0, 0, 100 RGB 0, 0, 0	
Lake Monitoring Station		installation of swp.tif required symbol size: 4.94mm (14pt)	CMYK 68, 79, 0, 0 RGB 108, 82, 162	
General Active Monitoring		installation of swp.tif required symbol size: 4.94mm (14pt)	CMYK 63, 0, 100, 0 RGB 104, 189, 69	
General Historic Monitoring Station		installation of swp.tif required symbol size: 4.94mm (14pt)	CMYK 0, 100, 100, 0 RGB 237, 28, 36	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
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			CMYK RGB	
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			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	
			CMYK RGB	

### **Appendix A - “Tiered Support”**

The purpose of this document and the ESRI ArcMap style file is to:

- create a consolidated symbolology for Source Protection Planning Assessment maps in support of the Clean Water Act.
- facilitate consistent map products provided to common neighbouring stakeholders (such as a municipality that shares multiple SPAs)

This document and style file are a work in progress so please provide any comments / updates / suggestions to:

1. Source Protection Programs Branch Coordinator  
Source Protection Programs Branch, Drinking Water Management Division,  
Ontario Ministry of the Environment  
e-mail contact: sppb.coordinator.moe@ontario.ca

If the issue cannot be resolved, contact:

2. Water Resources Information Program (WRIP)  
Geographic Information Branch, Science and Information Division  
Ontario Ministry of Natural Resources  
e-mail contact: wrip@ontario.ca



## Appendix B - Font Installation Instructions

### WINDOWS TRUE TYPE FONT INSTALLATION

#### NOTE:

The True Type fonts included with the symbology package are:

- swp.ttf
- MOE Symbology A.ttf
- MOE Symbology B.ttf

These must be installed in order for the ArcMap style file to function correctly. It is recommended that the required fonts be installed before the ArcMAP style file.

- Open the Windows FONTS folder.  
(START → SETTINGS → CONTROL PANEL → FONTS)
- In the FILE menu, click INSTALL NEW FONT.
- Click the drive and folder that contain the fonts you want to install.
- Double-click the icon for the font you want to install.
- Close the FONTS folder.
- To select more than one font to install, press and hold down the CTRL key, and then click the fonts you want.
- For TrueType fonts, you can also install the font by dragging and dropping the appropriate font files to the FONTS folder.

### Appendix C - ESRI ArcMap Style File Installation Instructions

#### ESRI ArcMap Style File Installation

**NOTE:**

The True Type fonts included with the symbology package are:

- swp.ttf
- MOE Symbology A.ttf
- MOE Symbology B.ttf

These must be installed in order for the ArcMap style file to function correctly. It is recommended that the required fonts be installed before the ArcMAP style file.

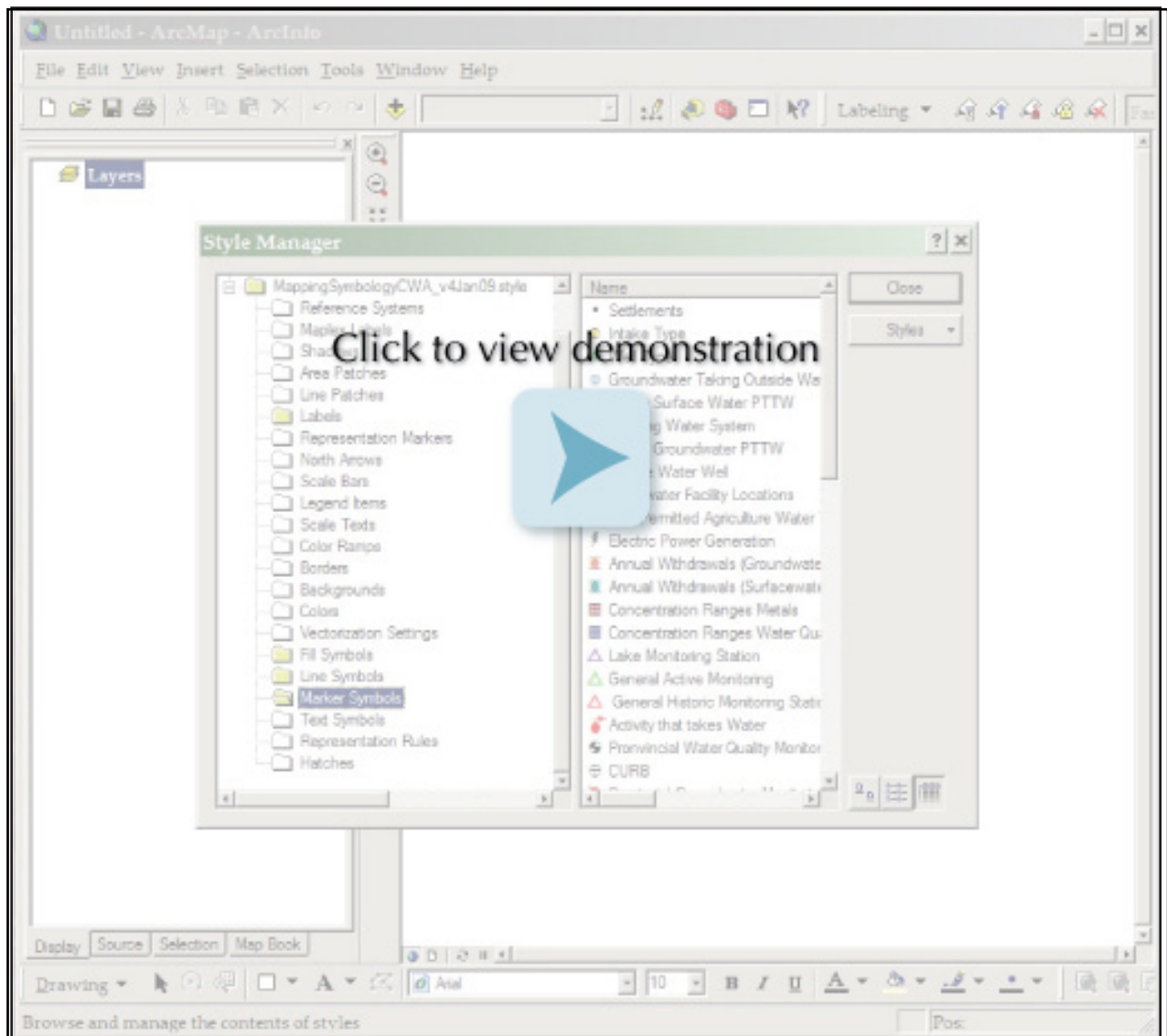
- a) Open the ArcGIS STYLES folder. This folder is usually located at C:\Program Files\ArcGIS\Styles
  - b) Paste a copy of the "MappingSymbologyCWA\_Feb10.style"\* file to the ArcGIS STYLES folder.
  - c) Open an ArcMap .MXD file where the SWP symbology needs to be applied.
  - d) Click the TOOLS menu, point to STYLES, and then click STYLE MANAGER.
  - e) Click the STYLES button and then choose "MappingSymbologyCWA\_Feb10.style"\* from the list. A "MappingSymbologyCWA\_Feb10.style"\* folder should then be visible in the left hand side of the Style Manager window.
  - f) Click the CLOSE button to close the Style Manager.
- The SWP symbology can now be accessed for the current ArcMAP .MXD file.
  - SWP symbology can be accessed from the CATEGORY dropdown list in the SYMBOL SELECTOR window.

NOTE: Symbol Sets and Individual Symbols have similar names to those found in the MappingSymbologyCWA\_Nov09.pdf document

- Steps c) through f) may have to be repeated for each individual map.
- Steps a) though f) may have to be repeated for other STYLE file

Click here for a demonstration of how to access the Style File within Arc Map 

\*file name may differ slightly in the demonstration

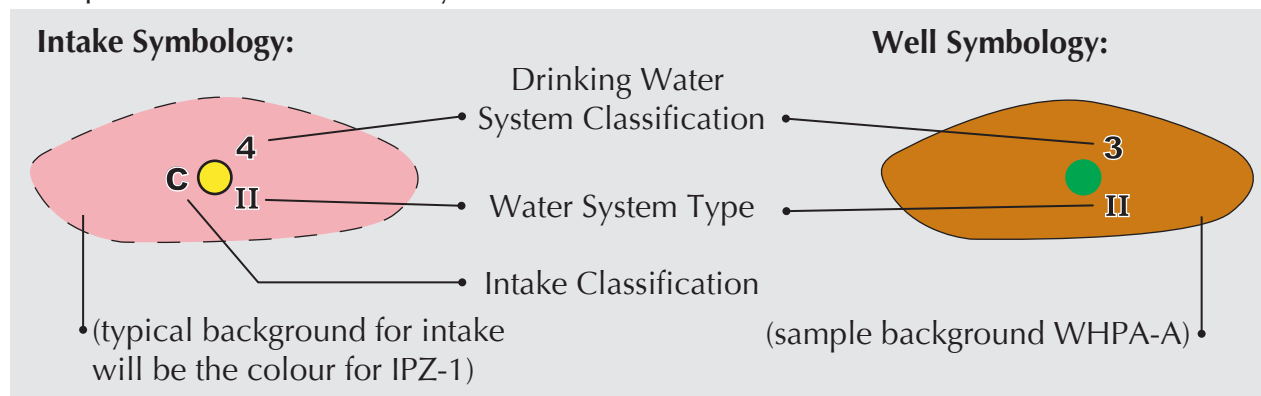
**Appendix D - Demonstration: Accessing the Symbolology Style File**

This demonstration can be accessed in the Mapping Symbolology PDF Document or MappingSymbolologyCWA\_Apr09\_DemoStyleFile.exe\*

\*file name may differ slightly in the demonstration

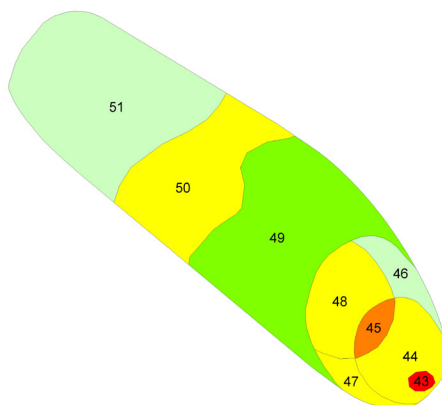
## Appendix E - Example of Symbolology and Label Placement

### Example for Intakes and Well Symbols



### Example of Mapping Prescribed Drinking Water Threats by Vulnerable Scoring Area

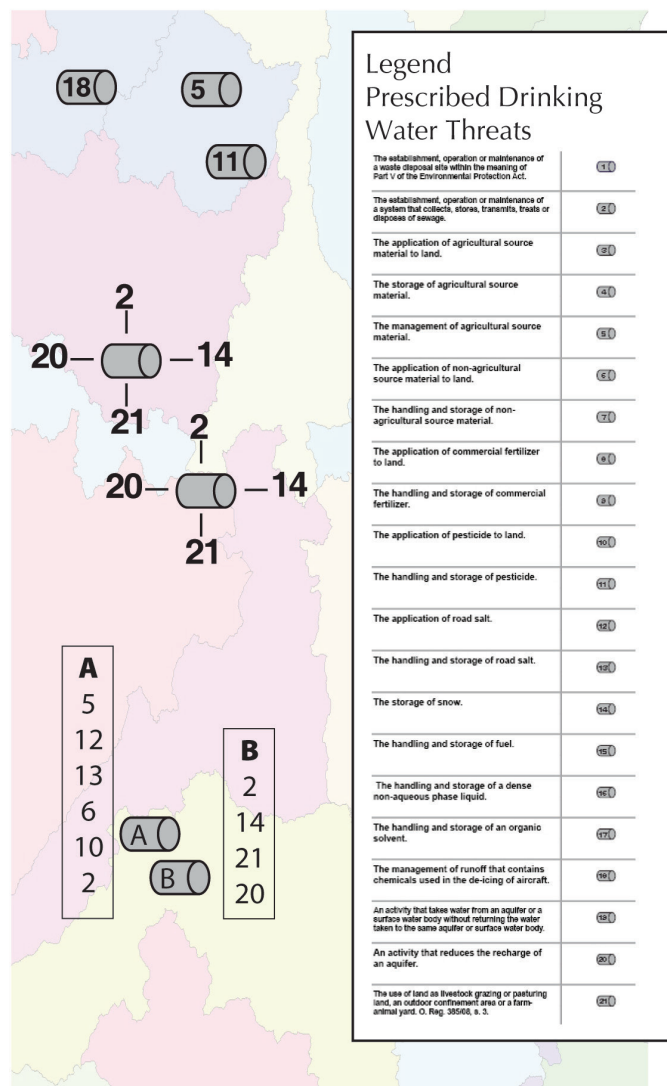
Threats mapping may be summarized by Vulnerable Scoring Area (VSA). In this instance the map should display the VSA and contain a summary table that lists all the threats present and the number of occurrences of each threat in each VSA. The following example is one possibility of how this could look.



	Threat Counts by Vulnerable Scoring Area								
	43	44	45	46	47	48	49	50	51
The handling and storage of pesticides	1					2		3	
The handling and storage of fuel		2	1		1	2		4	
The handling and storage of a dense non-aqueous phase liquid								1	

## Acceptable Options for Labelling Prescribed Drinking Water Threats locations

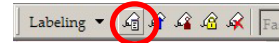
Option 1	Where possible represent the threats with a single threats symbol, label centred within symbol.
Option 2a	Where multiple threats occur in the same location, the individual threats will be added as a numeric label around the threats symbol (with leader lines pointing back to the threats symbol) (See Symbol A)*
Option 2b	If there are too many threats at a location to label around the symbol then the symbol will be labelled using incrementing letters which will reference a table on the map listing all the threats at that location. (see symbols B and C for one possible table layout)*
* the master list of Prescribed Drinking Water Threats should be in the Main Map Legend	



### Appendix F - ArcMap Multitple Label Placement

#### How to apply multiple labels

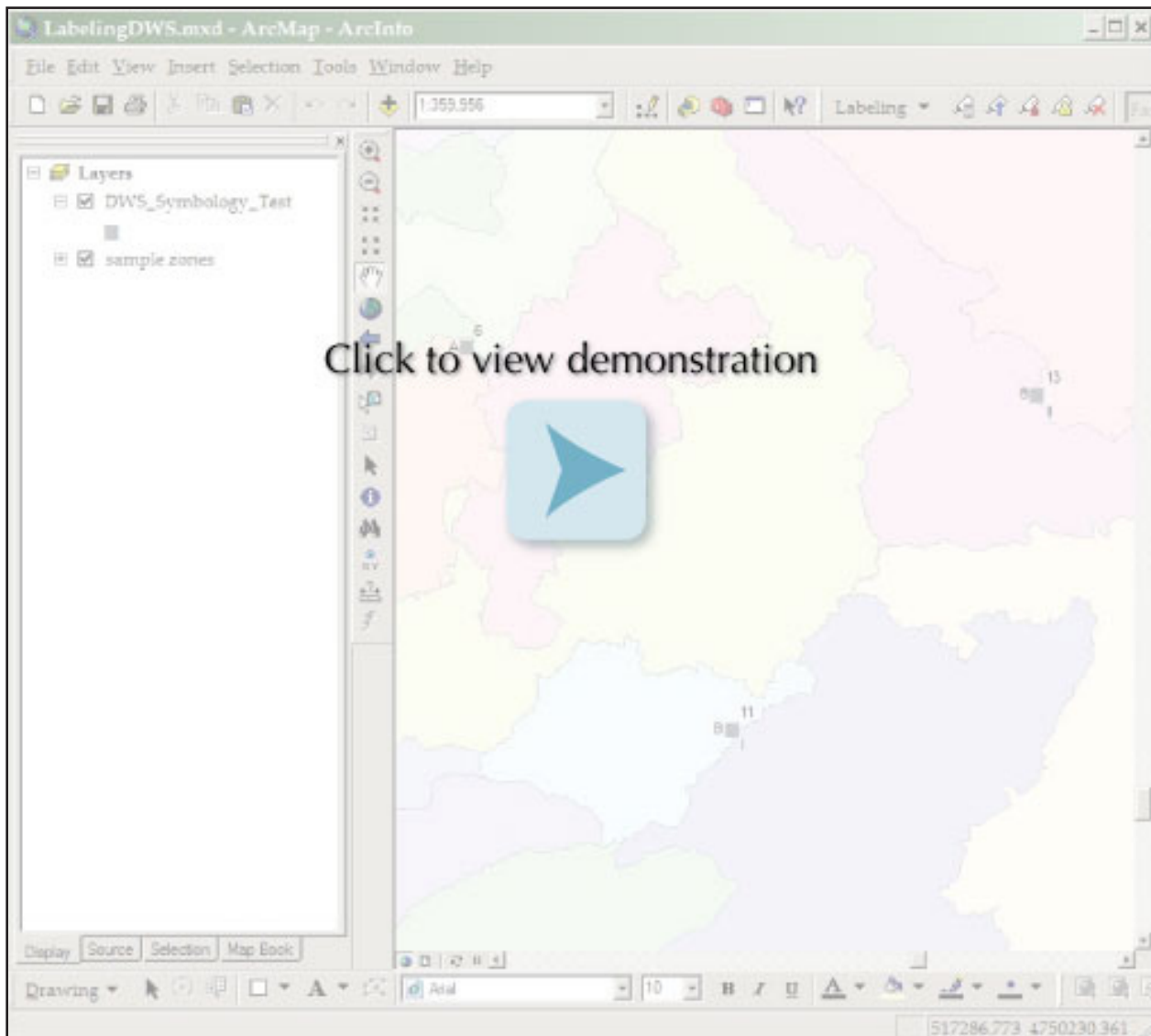
1. Open the ArcMap session that requires multiple labeling  
Select Labeling Toolbar (View → Toolbars → Labeling)
2. It may be nessessary to access the Maplex Extension  
Tools → Extensions → the Maplex Extension
3. Add the Symbolology Style file  
Tools → Styles → Style Manager  
On the Style Manager dialog box, Click the Styles button  
Select the MappingSymbolologyCWA\_Feb10 menu item  
Click the Close button
4. Accessing the Label Manager  
On the Labeling Toolbox Select the Label Manager  
The Label Manager dialog opens
5. Select the Layer that requires a multitple label
6. In the Class Name text box, enter the Names of the attributes as they appear in the attribute table of the data layer
7. Apply the labels for each attribute using Label Styles  
Select the Label Field combo box  
Select the first Class item (DWSCClass)  
Click the Label Styles... button  
The Label Styles Selector opens  
Scroll to the Drinking Water System Classification item  
Click the OK button
8. Repeat step 7 for all lables to be applied
9. Right Click the Layer, select Label Features



Click here for a demonstration of this process



## Appendix G - Demonstration: Applying Multiple Labels



This demonstration can be accessed in the Mapping Symbolology PDF Document or MappingSymbolologyCWA\_Apr09\_DemoLabels.exe\*

\*file name may differ slightly in the demonstration